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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,365	03/10/2004	Gottfried Beer	1431.104.101/FIN 429 US	4345
7590 10/31/2005			EXAMINER	
Dicke, Billig & Czaja, PLLC Fifth Street Towers Suite 2250 100 South Fifth Street Minneapolis, MN 55402			BLEVINS, JERRY M	
			ART UNIT	PAPER NUMBER
			2883	
DATE MAILED: 10/31/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/797,365

Applicant(s)

BEER ET AL.

Examiner

Jerry Martin Blevins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10 March 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 14 is objected to because of the following informalities:

The claimed "radiation guide holder" has no antecedent basis in the base claim

1. For purposes of examination, examiner interprets "radiation guide holder" to refer to the "waveguide holder" of claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pre Grant Publication to Pommer et al., number 2003/0201462.

Regarding claim 1, Pommer teaches a module (Figures 2A, 2B, 10A,10B) having a circuit carrier (element 47, Figure 2A and paragraphs 256 and 257, page 21) and having an electro-optical transducer mounted thereon (a VCSEL, element 20), the electro-optical transducer comprising: an optical waveguide holder (ferrule 36, Figures

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2A, 2B and paragraphs 256 and 257, page 21) having an optical waveguide receptacle (guide holes 76, Fig. 10A and 76, Fig. 10 B and paragraph 269 page 23) and a mounting area on an edge of the optical waveguide holder (Figures 2A, 2B); an optoelectronic component (VCSEL 20) having an optically active region on an active top side (page 2, paragraph 13) of a semiconductor chip (Figures 10A, 10B, element 19), and having a housing (paragraph 236, page 20) with a housing outer edge side in elongation of the mounting area, on which is arranged at least one contact area (Figures 2A, 2B, element 37) for electrically connecting the semiconductor chip to the circuit carrier; and wherein the optoelectronic component is arranged with its optically active region on an end side of the optical waveguide holder in such a way that the optical waveguide receptacle and the optically active region are oriented with respect to another, and the mounting area is mounted essentially at right angles with respect to the end side on the circuit carrier (Figures 2A, 2B, 10A, 10B).

Regarding claim 2, Pommer teaches the limitations of the base claim 1. Pommer also teaches that the module has an optoelectronic transducer at a module input and the electro-optical transducer at a module output (page 4, paragraph 43).

Regarding claim 3, Pommer teaches the limitations of the base claim 1. Pommer also teaches that the circuit carrier is populated with at least one electronic component and with a semiconductor chip that has an integrated circuit (page 4, paragraph 44).

Regarding claim 4, Pommer teaches the limitations of the base claim 1. Pommer also teaches that the optoelectronic component has at least one semiconductor chip (Figures 10A, 10B, element 19), which is connected to inner sections of flat conductors

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on its active top side (page 2, paragraph 13 and page 3, paragraph 27), outer sections of the flat conductors being arranged on one side at an individual housing outer edge having the contact area accessible on the edge side (Figures 2A, 2B, 10A, 10B).

Regarding claim 5, Pommer teaches the limitations of the base claim 1. Pommer also teaches that the optoelectronic component has a semiconductor chip (Figures 10A, 10B, element 19), which has a rewiring plate (indicated by wire bonds 21, 21') on its active top side with the optically active region being left free, incipiently cut though contacts of the rewiring plate being arranged at an individual housing outer edge and having contact areas accessible on the edge side (Figures 10A, 10B).

Regarding claim 6, Pommer teaches the limitations of the base claim 1. Pommer also teaches that the contact area has a solder deposit (page 11, paragraph 148).

Regarding claim 7, Pommer teaches the limitations of the base claim 1. Pommer also teaches that the contact area has an external contact (pages 17 and 18, paragraph 207).

Regarding claim 8, Pommer teaches the limitations of the base claim 1. Pommer also teaches that the circuit carrier has a printed circuit board (pages 16 and 17, paragraph 199 and paragraphs 151, 152, page 12).

Regarding claim 9, Pommer teaches the limitations of the base claim 1. Pommer also teaches that the circuit carrier has a multilayer ceramic substrate (pages 14 and 15, paragraph 185 and pages 16 and 17, paragraph 199 and paragraphs 151, 152, page 12).

Regarding claim 10, Pommer teaches the limitations of the base claim 1.

Pommer also teaches that the circuit carrier has a flexible multilayer conductor track sheet (pages 16 and 17, paragraph 199 and paragraphs 151, 152, page 12).

Regarding claim 11, Pommer teaches the limitations of the base claim 1.

Pommer also teaches that the optoelectronic component has, as the semiconductor chip, a laser diode (page 1, paragraph 5).

Regarding claim 12, Pommer teaches the limitations of the base claim 1.

Pommer also teaches that the optoelectronic component has, as the semiconductor chip, a light-emitting diode (page 1, paragraph 5).

Regarding claim 13, Pommer teaches the limitations of the base claim 1.

Pommer also teaches that the optoelectronic component has, as the semiconductor chip, a photodiode (page 1, paragraph 5).

Regarding claim 14, Pommer teaches the limitations of the base claim 1.

Pommer also teaches that the radiation guide holder has a mechanical supporting element arranged at the end side (page 2, paragraph 16 and page 12, paragraph 151).

Regarding claim 15, Pommel teaches a method for producing an electro-optical transducer (VCSEL 20, Figures 2A,2B,10A,10B) comprising: die-casting an optical waveguide holder having an end side (page 7, paragraph 94) and molding-in an optical waveguide receptacle toward the end side and molding-on a mounting area on an edge side of the optical waveguide holder at right angles with respect to the end side (page 6, paragraph 82 and Figures 10A,10B); producing an optoelectronic component (VCSEL 20, Figures 2A,2B,10A,10B), including: applying at least one semiconductor chip (19)

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having an optically active region to a rewiring structure (indicated by wire bonds 21, 21') comprising flat conductors (page 2, paragraph 13 and page 3, paragraph 27 and Figures 2A, 2B, 10A, 10B); connecting the optoelectronic component to the flat conductors via conductor tracks (pages 16 and 17, paragraph 199 and paragraphs 151, 152, page 12); forming at least one contact area of a flat conductor (Figures 2A, 2B, element 37), the contact area being arranged on a housing outer edge; and packaging the optoelectronic component in a housing with the contact area being left free (paragraph 236, page 20); and applying the optoelectronic component to the end side of the optical waveguide holder with orientation of the contact area in elongation of the mounting area and with orientation of the optical waveguide receptacle with respect to the optically active region (Figures 2A, 2B, 10A, 10B).

Regarding claim 16, Pommel teaches the limitations of the base claim 15.

Pommel also teaches that the conductor tracks of the semiconductor chip are electrically connected to the flat conductors by means of bonding technology via bonding wires (Figures 10A, 10B, elements 21, 21').

Regarding claim 17, Pommel teaches the limitations of the base claim 15.

Pommel also teaches that the semiconductor chip is adhesively bonded onto inner sections of flat conductors of a flat leadframe (page 13, paragraph 165).

Regarding claim 18, Pommel teaches the limitations of the base claim 15.

Pommel also teaches that the optoelectronic component is adhesively bonded onto the end side of the optical waveguide holder (page 20, paragraph 234).

Regarding claim 19, Pommel teaches a method for producing a module (Figures 2A,2B,10A,10B) having a circuit carrier (element 47, Figure 2A and paragraphs 256 and 257, page 21) and an electro-optical transducer (VCSEL 20) comprising: die-casting an optical waveguide holder having an end side (page 7, paragraph 94) and molding-in an optical waveguide receptacle toward the end side and molding-on a mounting area on an edge side of the optical waveguide holder at right angles with respect to the end side (page 6, paragraph 82 and Figures 10A,10B); producing an optoelectronic component (VCSEL 20, Figures 2A,2B,10A,10B), including: applying at least one semiconductor chip (19) having an optically active region to a rewiring structure (indicated by wire bonds 21, 21') comprising flat conductors (page 2, paragraph 13 and page 3, paragraph 27 and Figures 2A,2B,10A,10B); connecting the optoelectronic component to the flat conductors via conductor tracks (pages 16 and 17, paragraph 199 and paragraphs 151, 152, page 12); forming at least one contact area of a flat conductor (Figures 2A, 2B, element 37), the contact area being arranged on a housing outer edge; and packaging the optoelectronic component in a housing with the contact area being left free (paragraph 236, page 20); applying the optoelectronic component to the end side of the optical waveguide holder with orientation of the contact area in elongation of the mounting area and with orientation of the optical waveguide receptacle with respect to the optically active region (Figures 2A,2B, 10A, 10B); bonding the mounting side of the electro-optical transducer onto an edge region of the circuit carrier (Figure 2A); and connecting the contact area of the electro-optical transducer to a circuit carrier line (page 12, paragraph 151 and Figure 2A).

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Regarding claim 20, Pommel teaches the limitations of the base claim 19.

Pommel also teaches that the contact area is soldered to a circuit carrier line (page 14, paragraph 175).

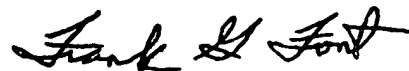
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMB



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